THEREFORE I CLAIM

1. A fin stabilization system adapted to be mounted to the area of influence of a boat which consists of the longitudinal rearward laterally outward one-third section of the boat having a longitudinal, lateral and vertical axis, the fin stabilization system comprising:

   a. a first fin and a second fin positioned in the area of influence of a boat having a rearward effective portion and a forward effect of portion and a depth whereby the first and second fins are parameterized where each are positioned to according to the following ranges:

      i. a rear base distance from the longitudinally rearward portion of the boat to the rearward effective portion between the ranges of 5 in. -- 12 in.,

      ii. having the distance between the rearward effective portion and the forward effective portion of no more than 70 in.,

      iii. having a depth component that is less than 6 in.,

   b. whereby the fin stabilization system is adapted to maintain the role of the boat about the longitudinal axis of no more than 20° from a horizontal plane in a turn in excess of speeds of 35 mph of the boat.

2. The claim as recited in claim 1 whereby the first and second fins are attached to a first and second mounting brackets each having a base region and a mounting extension whereby the base region is rigidly mounted to the lower surface of the lateral portion of the hull and the first and second fins are mounted to the mounting extensions of the first and second mounting brackets respectively.

3. The fin stabilization system as recited in claim 2 whereby the first and second fins are mounted to the mounting extensions of the first and second mounting brackets respectively whereby the mounting elements are flush with the surfaces of the first and second fins.

4. The fin stabilization system as recited in claim 1 whereby the role of the boat is no more than 15° in a turn in speeds in excess of 35 mph.

5. The fin stabilization system as recited in claim 1 whereby the role of the boat is no more than 15° in a turn in speeds in excess of 40 mph.

6. The fin stabilization system as recited in claim 5 whereby the longitudinal length of the boat is between 18 and 32 ft. were the depth component of the first and second fins is less than 4.5 in.

7. The fin stabilization system as recited in claim 5 whereby the turn diameter of the boat is no more than three boat lengths.

8. The fin stabilization system as recited in claim 6 whereby the turn diameter of the boat is no more than three boat lengths.

9. The fin stabilization system as recited in claim 5 whereby the turn diameter of the boat is no more than two boat lengths.

10. The fin stabilization system as recited in claim 6 whereby the turn diameter of the boat is no more than two boat lengths.

11. The fin stabilization system as recited in claim 1 whereby the hull of the boat is a plaining hull.

12. The fin stabilization system as recited in claim 1 whereby the boat comprises a metal multi-chambered perimeter hull portion having two side hull portions which are on opposite sides of the central hull portion, and which have forward perimeter hull portions converging toward one another at a forward end portion of the boat hull and said perimeter hull portion comprising:

a. a plurality of multi-creased wall sections, each of which has a lengthwise axis, and each formed from a related metal sheet in a surrounding wall configuration by being bent along a plurality of generally lengthwise creases, with wall section portions extending between adjacent pairs of said creases;

b. said multi-creased wall sections each having end perimeter edge portions with adjacent end perimeter edge portions of adjacent multi-chambered wall sections being adjacent to one another in end-to-end relationship at a perimeter juncture location;

c. a plurality of baffles, with each baffle being positioned at a related perimeter juncture location, with a perimeter edge of the baffle being adjacent to the end perimeter edge portions of adjacent multi-chambered wall sections, and with the adjacent end perimeter edge portions and the perimeter edge of the adjacent baffle being welded together to form a watertight seal, and with the adjacent baffle making an air seal between interior regions of adjacent multi-chambered wall sections;

d. said multi-chambered wall sections and said baffles thus being joined together to provide a plurality of airtight floatation chambers, with each chamber being enclosed by a related wall section and two related end baffles, with weld connections at the related end baffles forming an airtight connection.

13. The fin stabilization system as recited in claim 1 whereby the fin stabilization system is adapted to raise the laterally outward fin in a turn out of the water and the laterally inward fin in a turn is submerged in the water.

14. The fin stabilization system as recited in claim 13 whereby the boat has an engine that is operatively attached to a prop and in a turn the prop receives water with the lower concentration of air than without the fin stabilization system during a turn greater than 35 mph.

15. The fin stabilization system as recited in claim 14 whereby the role about the longitudinal axis is less than 15° at a speed in excess of a 40 mi.-per-hour turn.

16. The fin stabilization system as recited in claim 15 were the boat comprises a second engine that is operatively connected to a second prop whereby the second prop is exposed to a lower concentration of air than without the fin stabilization system during a turn greater than 35 mph.

17. The fin stabilization system as recited in claim 14 whereby the role about the longitudinal axis is less than 10° at a speed in excess of a 45 mi.-per-hour turn.

18. The fin stabilization system as described in claim 16 whereby the turn diameter is less than 2 1/2 boat length for a 180-degree turn.

19. The fin stabilization system as described in claim 17 whereby the turn is conducted where the engine is under full throttle for the entirety of the turn.

20. The fin stabilization system as described in claim 1 whereby a firearm is adapted to be mounted to the bow of the boat.

21. The fin stabilization system as recited in claim 1 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 1.0.

22. The fin stabilization system as recited in claim 1 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 1.5.

23. The fin stabilization system as recited in claim 1 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 2.0.

24. The fin stabilization system as recited in claim 1 whereby the boat is between 17 ft. and 35 ft. in longitudinal length.

25. The fin stabilization system as recited in claim 1 whereby the boat length is between 20 ft. and 32 ft. and longitudinal length.

26. A fin stabilization system adapted to be mounted to the area of influence of a boat which consists on the longitudinal rearward laterally outward one-third section of the boat having a longitudinal, lateral and a vertical axis, the fin stabilization system comprising:

a. a first fin and the second fin positioned in the area of influence of a boat having a rearward effective portion and a forward effect of portion and a depth whereby the first and second fins are parameterized where each are positioned to according to the following ranges,

i. a rear base distance from the longitudinally rearward portion of the boat to the rearward effective portion between the ranges of 5 in. -- 12 in.,

ii. having the distance between the forward effective portion positioned in the area of influence of the boat,

iii. having a depth component that is less than 6 in.,

b. whereby the fin stabilization system is adapted to maintain the role of the boat about the longitudinal axis of no more than 20° from a horizontal plane in a turn in excess of speeds of 35 mph of the boat.

27. The claim as recited in claim 26 whereby the first and second fins are attached to a first and second mounting brackets each having a base region and a mounting extension whereby the base region is rigidly mounted to the lower surface of the lateral portion of the hull and the first and second fins are mounted to the mounting extensions of the first and second mounting brackets respectively.

28. The fin stabilization system as recited in claim 27 whereby the first and second fins are mounted to the mounting extensions of the first and second mounting brackets respectively whereby the mounting elements are flush with the surfaces of the first and second fins.

29. The fin stabilization system as recited in claim 26 whereby the role of the boat is no more than 15° in a turn in speeds in excess of 35 mph.

30. The fin stabilization system as recited in claim 26 whereby the role of the boat is no more than 15° in a turn in speeds in excess of 40 mph.

31. The fin stabilization system as recited in claim 30 whereby the longitudinal length of the boat is between 18 and 32 ft. were the depth component of the first and second fins is less than 4.5 in.

32. The fin stabilization system as recited in claim 30 whereby the turn diameter of the boat is no more than three boat lengths.

33. The fin stabilization system as recited in claim 31 whereby the turn diameter of the boat is no more than three boat lengths.

34. The fin stabilization system as recited in claim 30 whereby the turn diameter of the boat is no more than two boat lengths.

35. The fin stabilization system as recited in claim 31 whereby the turn diameter of the boat is no more than two boat lengths.

36. The fin stabilization system as recited in claim 26 whereby the hull of the boat is a plaining hull.

37. The fin stabilization system as recited in claim 26 whereby the boat comprises a metal multi-chambered perimeter hull portion having two side hull portions which are on opposite sides of the central hull portion, and which have forward perimeter hull portions converging toward one another at a forward end portion of the boat hull and said perimeter hull portion comprising:

c. a plurality of multi-creased wall sections, each of which has a lengthwise axis, and each formed from a related metal sheet in a surrounding wall configuration by being bent along a plurality of generally lengthwise creases, with wall section portions extending between adjacent pairs of said creases;

d. said multi-creased wall sections each having end perimeter edge portions with adjacent end perimeter edge portions of adjacent multi-chambered wall sections being adjacent to one another in end-to-end relationship at a perimeter juncture location;

e. a plurality of baffles, with each baffle being positioned at a related perimeter juncture location, with a perimeter edge of the baffle being adjacent to the end perimeter edge portions of adjacent multi-chambered wall sections, and with the adjacent end perimeter edge portions and the perimeter edge of the adjacent baffle being welded together to form a watertight seal, and with the adjacent baffle making an air seal between interior regions of adjacent multi-chambered wall sections;

f. said multi-chambered wall sections and said baffles thus being joined together to provide a plurality of airtight floatation chambers, with each chamber being enclosed by a related wall section and two related end baffles, with weld connections at the related end baffles forming an airtight connection.

38. The fin stabilization system as recited in claim 26 whereby the fin stabilization system is adapted to raise the laterally outward fin in a turn out of the water and the laterally inward fin in a turn is submerged in the water.

39. The fin stabilization system as recited in claim 38 whereby the boat has an engine that is operatively attached to a prop and in a turn the prop receives water with the lower concentration of air than without the fin stabilization system during a turn greater than 35 mph.

40. The fin stabilization system as recited in claim 39 whereby the role about the longitudinal axis is less than 15° at a speed in excess of a 40 mi.-per-hour turn.

41. The fin stabilization system as recited in claim 40 were the boat comprises a second engine that is operatively connected to a second prop whereby the second prop is exposed to a lower concentration of air than without the fin stabilization system during a turn greater than 35 mph.

42. The fin stabilization system as recited in claim 39 whereby the role about the longitudinal axis is less than 10° at a speed in excess of a 45 mi.-per-hour turn.

43. The fin stabilization system as described in claim 42 whereby the turn diameter is less than 2 1/2 boat length for a 180-degree turn.

44. The fin stabilization system as described in claim 43 whereby the turn is conducted where the engine is under full throttle for the entirety of the turn.

45. The fin stabilization system as described in claim 26 whereby a firearm is adapted to be mounted to the bow of the boat.

46. The fin stabilization system as recited in claim 26 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 1.0.

47. The fin stabilization system as recited in claim 26 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 1.5.

48. The fin stabilization system as recited in claim 26 whereby the boat is adapted to make a turn creating a G-force in the horizontal direction that is in excess of 2.0.

49. The fin stabilization system as recited in claim 26 whereby the boat is between 17 ft. and 35 ft. in longitudinal length.

50. The fin stabilization system as recited in claim 26 whereby the boat length is between 20 ft. and 32 ft. and longitudinal length.

51. A method of constructing a metal multi-chambered perimeter hull section of a boat hull where the multi-chambered perimeter hull section comprises two perimeter side portions and a forward perimeter portion defining a central region in which a central hull portion is located, said method comprising:

a. a) providing a platform assembly having a plurality of placement holders which are adapted to hold multi-creased wall sections in a preassembled holder arrangement corresponding to said hull perimeter configuration;

b. b) positioning multi-chambered wall sections in the placement holders in a preassembled perimeter arrangement, with each of said multi-chambered wall sections being formed as a surrounding wall configuration having a plurality of creases along which the multi-creased wall section is bent at crease locations, with each multi-chambered wall section portions located between proximate crease locations, and with each multi-creased wall section having oppositely positioned end perimeter portions;

c. c) positioning baffles between each adjacent end perimeter portions and adjacent multi-chambered wall sections, with end perimeter edges of the adjacent multi-chambered wall sections being in a positioned alignment with one another;

d. d) welding each baffle to its adjacent end perimeter portions of the adjacent multi-chambered wall sections to form a plurality of hull floatation chambers which form said multi-chambered perimeter hull section.

e. e) attaching a fin stabilization system having a first fin and a second fin positioned in an area of influence of a boat having a rearward effective portion and a forward effect of portion and a depth whereby the first and second fin is our parameterized where each are positioned to according to the following ranges,

i. a rear base distance from the longitudinally rearward portion of the boat to the rearward effective portion between the ranges of 5 in. -- 12 in.,

ii. having the distance between the forward effect of portion positioned in the area of influence of the boat,

iii. having a depth component that is less than 6 in.,

f. whereby the fin stabilization system is adapted to maintain the role of the boat about the longitudinal axis of no more than 20° from a horizontal plane in a turn in excess of speeds of 35 mph of the boat.

52. The method as recited in claim 26, wherein forward multi-creased wall sections in the preassembled arrangement have forward adjacent end portions, said method further comprising joining the forward end portions of the forward multi-creased wall sections to one another.

53. The method as recited in claim 26, wherein forward multi-creased wall sections in the preassembled arrangement are positioned to converge toward one another to conform to a configuration of the boat that is being constructed.

54. A boat hull comprising:

a. a central hull portion;

b. a metal multi-chambered perimeter hull portion having two side hull portions which are on opposite sides of the central hull portion, and which have forward perimeter hull portions converging toward one another at a forward end portion of the boat hull;

c. said perimeter hull portion comprising:

i. a plurality of multi-creased wall sections, each of which has a lengthwise axis, and each formed from a related metal sheet in a surrounding wall configuration by being bent along a plurality of generally lengthwise creases, with wall section portions extending between adjacent pairs of said creases;

ii. said multi-creased wall sections each having end perimeter edge portions with adjacent end perimeter edge portions of adjacent multi-chambered wall sections being adjacent to one another in end-to-end relationship at a perimeter juncture location;

iii. a plurality of baffles, with each baffle being positioned at a related perimeter juncture location, with a perimeter edge of the baffle being adjacent to the end perimeter edge portions of adjacent multi-chambered wall sections, and with the adjacent end perimeter edge portions and the perimeter edge of the adjacent baffle being welded together to form a watertight seal, and with the adjacent baffle making an air seal between interior regions of adjacent multi-chambered wall sections;

iv. said multi-chambered wall sections and said baffles thus being joined together to provide a plurality of airtight floatation chambers, with each chamber being enclosed by a related wall section and two related end baffles, with weld connections at the related end baffles forming an airtight connection.

v. a fin stabilization system having a first fin and a second fin positioned in an area of influence of a boat having a rearward effective portion and a forward effect of portion and a depth whereby the first and second fin is our parameterized where each are positioned to according to the following ranges,

- a rear base distance from the longitudinally rearward portion of the boat to the rearward effective portion between the ranges of 5 in. -- 12 in.,
- having the distance between the forward effect of portion positioned in the area of influence of the boat,
- having a depth component that is less than 6 in.,

vi. whereby the fin stabilization system is adapted to maintain the role of the boat about the longitudinal axis of no more than 20° from a horizontal plane in a turn in excess of speeds of 35 mph of the boat.

55. The boat hull as recited in claim 54, wherein the perimeter hull portion has an upper portion, a lower portion, an outer side portion further from a central longitudinal axis, and an inner side portion closer to said central longitudinal axis, at least side portions of said perimeter hull portion having a cross-sectional configuration such that the outer sidewall portions each comprise an upper generally vertical sidewall portion, and a lower outer sidewall portion which comprises a plurality of adjacent lower outside wall section portions, each of which makes an angle with a horizontal axis of the boat hull, with said lower outside wall portions being arranged so that any lower outside wall portion at a higher location makes a greater angle with said horizontal axis than any lower outer sidewall portion at a lower

location, so that said plurality of lower outside wall portions of each outer sidewall portion collectively define a lower outside surface contour following a downwardly and inwardly curved alignment.

56. The boat hull as recited in claim 54, wherein the perimeter hull portion has an upper portion, a lower portion, an outer side portion further from a central longitudinal axis, and an inner side portion closer to said central longitudinal axis, at least side portions of said perimeter hull portion have a cross-sectional configuration being such that the lower portion of each perimeter hull portion has an inner lower portions closer to the longitudinal center axis, and these lower inner portions extend at a laterally inward and upward slant toward said longitudinal center axis, the central hull portion comprises a V-shaped hull portion having upwardly and outwardly slanting central hull walls, and each inner lower portion forms with an adjacent wall section of the central hull portion, a longitudinal recess, whereby two longitudinally extended recesses are formed, whereby with the boat traveling through water, the water is directed in a lateral and upward direction to the longitudinal recesses, with the water being redirected laterally and downwardly to provide lift.

57. The boat hull as recited in claim 54, wherein the perimeter hull portion has an upper portion, a lower portion, an outer side portion further from a central longitudinal axis, and an inner side portion closer to said central longitudinal axis, at least side portions of said perimeter hull portion have a cross-sectional configuration being such that the inner side portion has an upper inside portion that is substantially vertical, and a lower inside portion which also has a substantial vertical alignment component that is located further inwardly toward the longitudinal center axis and the upper portion of the inner side portion, said upper and lower inner side portions being connected by a connecting wall portion having a substantial horizontal alignment component interconnecting a lower part of the upper inside portion with an upper part of the lower inside portion.

58. A method of stabilizing a boat that has a longitudinal length between 17 ft. and 35 ft. having a longitudinal and lateral axis in order to maintain the roll of the boat about the longitudinal axis during a high-speed turn that is no more than 20° with respect to the horizontal plane at speeds in excess of 35 mph, the boat having an engine which produces a maximum horsepower, the method comprising:

a. attaching a fin stabilization system to the area of influence of a boat which consists on the longitudinal rearward laterally outward one-third section of the boat having a longitudinal, lateral and a vertical axis, the fin stabilization system comprising a first fin and a second fin positioned in the area of influence of a boat having a rearward effective portion and a forward effect of portion and a depth whereby the first and second fin is our parameterized where each are positioned to according to the following ranges,

i. a rear base distance from the longitudinally rearward portion of the boat to the rearward effective portion between the ranges of 5 in. -- 12 in.,

ii. having the forward effect of portion positioned in the area of influence of the boat,

iii. having a depth component that is less than 6 in,

b. adjusting the dimensions of the first and second fin where:

i. the forward effective portion is positioned longitudinally more forward in a longer boat and it is positioned longitudinally more rearward in a shorter boat,

ii. decreasing the depth of the first and second fins as the designed maximum horsepower of the boat is increased and increasing the depth of the first and second fins as the designed maximum horsepower of the boat is decreased.

59. The method as recited in claim 58 whereas the method for adjusting allows for stabilization of the boat to minimize the longitudinal roll of the boat about the longitudinal axis and allow a lower percentage of aerated water to pass through the propeller of the boat.

60. The method as recited in claim 59 whereas when the designed gross weight of the boat increases the depth of the first and second fins increases and when the designed gross weight of the boat decreases the depth value for the first and second fins decreases.

61. The method as recited in claim 59 where as the designed gross weight of the boat increases, the lower range value of the distance between the rearward effective portion and the forward effective portion of the first and second fins increases.